

The Joint Service Small Arms Program (JSSAP)



Light Fighter
Lethally
After next



Stephen C. Small, Ph.D.

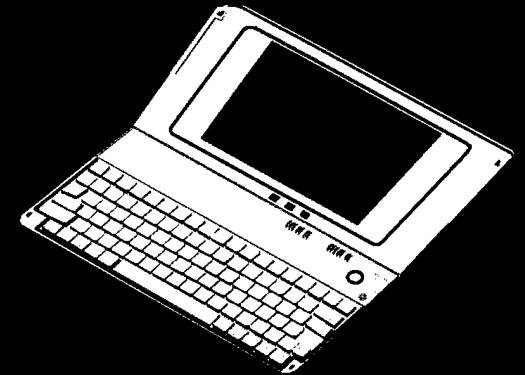
(973) 724-7043

ssmall@pica.army.mil



Briefing Agenda

- Objective of Program
- Background Information
- Methodology
- Products
- Plans (STO)
- Summary/Plans





Objective of Program



**-To conceptualize and quantify
the potential of a lethality
system for the individual
warrior of the Army After
Next**



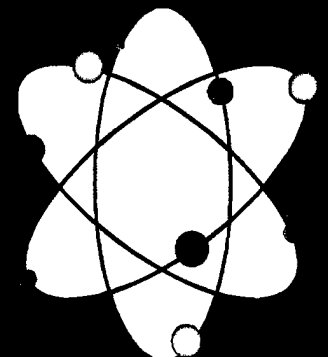
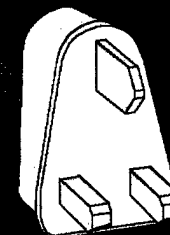
• Background Information

- The Future Conclave OICW & OCSW Conference (July 1997)
- The Future Conclave “Blue Sky” -2020 Conference (September 1997)





- **The Future Conclave “Blue Sky” -2020**
- **Methodology: Four Subgroups**
 - **Capabilities**
 - **Human Factors**
 - **Lethality Mechanisms/Target Coupling**
 - **Energy Considerations**



LIGHTNING LEADERSHIP LIVE! LIVE!



- Products (Results of Subgroup Discussions):
- Capabilities Subgroup:
 - Greater accountability of the soldier
 - Improved sensing system, and environmental factors
 - A multi-faceted engagement process
 - A new paradigm beyond “shoot, move and communicate”



LIGHTSIGHT



- **Products (continued):**
- **Human Factors Subgroup:**
 - Human-weapon fusion as an interactive melding
 - Individualizing weaponry
 - Status monitoring, indirect sighting; jitter and security control
 - Embedded training

LIGHT TIGER LETHALITY TARGET IVEX



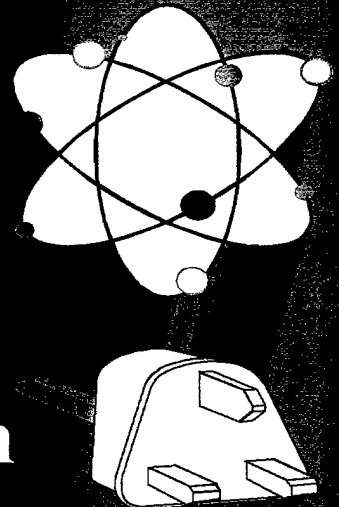
- **Products (continued):**
- **Lethality Mechanisms/Target Coupling Subgroup:**
 - **Small caliber, high velocity, busse**
warheads for long range engagements
(with low recoil)
 - **A greater lethality radius/footprint**
 - **Guided projectiles**



LIGHTNING LEADERSHIP IN THE NEXT



- **Products (continued):**
- **Energy Considerations Subgroup:**
 - **A power system architecture c/o:**
 - Prime energy store
 - Power distribution and conversion hardware
 - Intermediate energy storage elements
 - Intelligent power controller
 - Energy recovery elements
 - Self-protection elements



LIGHT FIGHTER LETHALITY AFTER NEXT



- **STO Number: ARD-05: Light Fighter Lethality After Next**



- A complete lethality system
- An organic lethality component (\approx 5lbs)
- A seeker projectile
- An open breech launch mechanism

LIGHTWEIGHT LETHALITY TARGET IVEX



- **Summary**

- **Goal**

- **Ultra-light**
 - **Probability of incapacitation (=1.)**
 - **Organic lethality of dismounted soldier**

- **Focused on AAN time frame**

- **component demos FY 02-05**
 - **System demos FY 08-12**
 - **Fielding FY20-25**

Lightweight Lethality



- **Future Activities:**

- Define a Science & Technology Objective (STO) Program
- Protect available funding
- Define and demonstrate the Lethality Component of lightweight soldier for AAN
- A more agile/lightweight soldier
- <5 lbs.. Lethality concept



LIGHTWEIGHT CERTAINLY NEVER NEVER



- **Future Activities (continued)**
- **Demonstrate System Components**
- **Identify/fill data gaps**
- **Conduct Technology Searches**
 - **Individual soldier sensors**
 - **seeker projectiles**
 - **lightweight launch mechanisms**



LIGHTNING BOLT LECTURE SERIES



- Stephen C. Small, Ph.D.
- (973) 724-7043
- ssmall@pica.army.mil